

Facility Name: **Hazlehurst Wood Pellets, LLC**
City: Hazlehurst
County: Jeff Davis
AIRS #: 04-13-161-00023

Application #: TV-465967 & TV-518920
Date Application Received: February 17, 2020, and October 19, 2020
Permit No: 2499-161-0023-V-03-0

Program	Review Engineers	Review Managers
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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Facility Identification**

1. Facility Name: Hazlehurst Wood Pellets, LLC

2. Parent/Holding Company Name

Hazlehurst Wood Pellets, LLC

3. Previous and/or Other Name(s)

None. Facility always known as Hazlehurst Wood Pellets, LLC

4. Facility Location

430 Hulett Wooten Farms Road, Hazlehurst, GA 31539 (Jeff Davis County)

5. Attainment, Non-attainment Area Location, or Contributing Area

The facility is located in an attainment area for all pollutants.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control to Hazlehurst Wood Pellets.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/Effectiveness	Purpose of Issuance
2499-161-0023-V-02-0	August 18, 2015	Initial Title V Permit
2499-161-0023-V-02-1 (Revoked July 2019)	May 25, 2016	502(b)(10) permit change addition of a new 50 MMBTU/hr wood fired burner to each production line.
2499-161-0023-V-02-2 (Revoked July 2019)	July 6, 2016	Significant modification without construction
2499-161-0023-V-02-3 (Revoked July 2019)	Nov. 15, 2017	502(b)(10) amendment addition of baghouse to each line parallel to existing baghouse.
2499-161-0023-V-02-4	February 21, 2020	Significant modification with construction new furnace and dryer plus control equipment for dryers, dry hammermills, pellet press and pellet coolers.

D. Process Description

1. SIC Codes(s)

2499 – Wood product Not Elsewhere Classified

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The facility makes wood pellets from woodchips (slash and Loblolly Pine).

3. Overall Facility Process Description

The Pellet mill has a furnace, one dryer, one chipper, 2 green hammermills, 7 dry hammermills, and 3 pellet lines with a total of 15 pellet presses and 3 pellet coolers. The wood-fired furnace is rated at a nominal, approximate 190 MMBTU/hour. Particulate (PM) emissions from the furnace and dryer is controlled with a wet electrostatic precipitator (WESP). PM emissions from the dry hammermills is controlled by cyclofilters. PM emissions from the presses and coolers will be controlled by baghouses. Volatile organic compound (VOC) and organic hazardous air pollutant (HAP) emissions from the furnace and dryer are controlled with a Regenerative Thermal Oxidizer (RTO). VOC and HAP emissions from the dry hammermills, presses, and coolers are controlled with a Regenerative Catalytic Oxidizer (RCO). The RTO and RCO will each have a gas-fired burner rated at 6 MMBTU/hour. The new dryer has a capacity of 78 oven dried tons per hour, and an annual throughput capacity of 619,000 oven dried tons (ODT). ODT = weight of wood in short tons at 11% moisture, calculated.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

The facility is synthetic minor source under PSD/NSR regulations for CO, NO_x, PM and VOC. Facilitywide CO, VOC, PM and NO_x emissions are limited to 249 tons/year in order to avoid going through a New Source Review under the PSD rules.

The facility is located in Jeff Davis County which is an attainment area for all pollutants. Therefore, non-attainment area new source review does not apply.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	yes	✓		
PM ₁₀	yes	✓		
PM _{2.5}	yes	✓		
SO ₂	yes			✓
VOC	yes	✓		
NO _x	yes	✓		
CO	yes	✓		
Individual HAP	yes			✓
Total HAPs	yes			✓

3. MACT Standards

MACT standards do not apply to this pellet mill since the facility is a minor source of HAPs. Area source boiler MACT (40 CFR 63 Subpart 6J) does not apply to the wood-fired burners since the burners are defined as process heaters in the area source boiler MACT. Process heaters are exempt from the area source boiler MACT. The wood fired burner is not a boiler/fuel burning equipment since no water is heated to generate steam.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	no
Program Code 8 – Part 61 NESHAP	no
Program Code 9 - NSPS	no
Program Code M – Part 63 NESHAP	no
Program Code V – Title V	yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

Facilitywide NO_x, CO, PM and VOC emissions are capped at 249 tons for the purpose of avoiding new source review under the PSD Rules.

Individual and Total HAP emissions are limited to less than the major source emission limit of 10 tpy for single HAP and 25 tpy for total HAPs for MACT avoidance. A dryer production limit of 619,000 ODT/yr further bolsters the PSD avoidance limits. It should be noted that production limit may be changed in the future via a permit action if the Division determines that the operations at the plant have lower emission factors than those currently established in this permit. These facility-wide emission limits are made enforceable by tracking production throughput in both the dryer and the pelletizing process and using emission factors to calculate emissions.

The applicant submitted a Toxic Impact Assessment following Georgia's 2017 Toxic Guidelines. The compounds evaluated were formaldehyde, methanol, and acetaldehyde. The results demonstrate that compliance with the Acceptable Ambient Concentrations (AACs) for these compounds.

B. Applicable Rules and Regulations

Rules and Regulations Assessment – PSD does not apply since the facility has PSD avoidance limits for NO_x, CO, PM and VOC and is considered a conditional minor source with respect to PSD. MACT does not apply since the facility is a minor source of HAPs.

C. Compliance Status

The facility is in compliance with all applicable rules and regulations.

D. Permit Conditions

Conditions 2.1.1 to 2.1.4 are new source review avoidance conditions under the PSD rules for CO, NO_x, VOC and PM since facilitywide potential emissions for these pollutants is capped at 249 tons per year. The 249 tpy limit is also known as PSD avoidance limits.

Condition 2.1.5 is a MACT avoidance condition and limit HAP emission to less than the major source threshold for single and Total HAPs.

Condition 2.1.6 limits the Dryer production to 619,000 tons per year of Oven Dry Tons @ 11% moisture to ensure that the facility is not a major source under the PSD rules.

III. Regulated Equipment Requirements

A. Equipment List for the Process

Emission Units		Applicable Requirements/Standards	Air Pollution Control Devices	
ID No.	Description		ID No.	Description
P1	Log storage/handling (E1-E3) Debarking/screening (E4-E5) Chipper E6 Chip piles Truck Dump 1-2	391-3-1-.02(2)(n)	n/a	n/a
P2	Green Hammermills (1-2) (E7-E8)	391-3-1-.02(2)(n)	n/a	n/a
P3	Wood fired furnace. 190 MMBTU/hr (E9-E10)	391-3-1-.02(2)(g) 391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	WESP	Wet Electrostatic Precipitator
DRY	Pellet Dryer 91 ODT/hr	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	RTO	Regenerative Thermal Oxidizer
P4	Dry Hammermills (7) (HM1-HM7)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	CYFL1-7	Cyclofilters 1-7
PEL1-5	Line 1 Presses (5) (E18-E22)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	BH1	Baghouse 1
COOL1	Line 1 Cooler (E23)	391-3-1-.02(2)(n)	RCO	Regenerative Catalytic Oxidizer
PEL6-10	Line 2 Presses (5) (E24-28)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e)	BH2	Baghouse 2
COOL2	Line 2 Cooler (E29)	391-3-1-.02(2)(n)	RCO	Regenerative Catalytic Oxidizer
PEL11-15	Line 3 Presses (5) (E30-34)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)	BH3	Baghouse 3
COOL3	Line 3 Cooler (E35)		RCO	Regenerative Catalytic Oxidizer
HAND	Dry Chip Silo E36 Pellet Handling/storage/ Loadout/silos 1-4 (E37-E40)	391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(n)		

B Equipment & Rule Applicability

Rules and Regulations Assessment:

NSPS Subpart Dc does not apply to the proposed wood burner/furnace since it supplies direct heat to the pellet furnish dryer. The burner/furnace does not produce steam, heat water or other heat transfer fluid and is not a boiler or fuel burning equipment. The opacity of visible emissions from the dryers, hammermills, pellet presses and pellet coolers are limited to 40% by Georgia Rule (b). PM emissions from the pellet furnish dryer, hammermill, pellet presses and pellet coolers will be subject to Georgia Rule (e).

The sulfur content of sawdust fired in the dryer burner is limited to 3% by weight by Georgia Rule (g)2 ; no sulfur monitoring is necessary due to the natural low sulfur content of the wood. Fugitive emissions from the dryer, Hammermills, Pellet presses and Pellet coolers are limited to 20% by Georgia Rule (n)2.

Emission and Operating Caps:

The RTO is required to be operated at 1600 °F or the temperature established during the most recent destruction efficiency test. The RCO is required to be operated at 800 °F or the temperature established during the most recent destruction efficiency test.

C. Permit Conditions

Condition 3.2.1 requires the operation of WESP and RTO whenever the pellet furnish dryer operates for compliance with the VOC and HAPs PSD avoidance limit.

Condition 3.2.2 requires the Permittee to operate and maintain all cyclofilters, baghouses and RCO during operation of the dry hammermills, pellet presses and pellet coolers to comply with the PSD avoidance limits for PM, CO and VOC.

Condition 3.2.3 requires operation of RTO at 1600 °F or the temperature established during the most recent destruction efficiency test that demonstrates compliance with the 95% reduction/destruction efficiency, whichever is higher.

Condition 3.2.4 requires operation of RCO at 800 °F or the temperature established during the most recent destruction efficiency test that demonstrates compliance with the 95% reduction/destruction efficiency, whichever is higher.

Condition 3.4.1 limits opacity of visible emissions from the Furnace/Dryer, Dry Hammermill, Pellet Press and Cooler to 40% per Georgia Rule (b).

Condition 3.4.2 limits PM emissions from the Furnace/Dryer, Dry Hammermill, Pellet Press and Cooler per Georgia Rule (e).

Condition 3.4.3 lists some steps the Permittee may adopt to minimize fugitive emissions from the pellet mill.

Condition 3.4.4 limits opacity of fugitive emissions to 20% per Georgia Rule (n).

Condition 3.4.5 limits the sulfur content of fuel burned in the Furnace, to less than 3% by weight and 2.5% by weight for the fuel burned in the RTO and RCO burners per Georgia Rule (g)2.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

To ensure that the emission factors used reflect actual emissions, the facility must test the RTO and RCO by April 2024 and thereafter every 4 years. If the test results are higher than the permitted emission factors, the permittee must use the new, higher test result-based factor and submit an application to revise the permitted factor upward accordingly. If the tests show lower emission factors, the permitted factors will still be used. The permitted emission factors can be altered down only via a permit application that has been reviewed and permit amendment issued by GEPD.

HAND must be tested for VOC since the factor to be used is lower than the EPD default factor. EPD proposes to require testing on only one silo in HAND to represent the emissions profile for the four identical silos. This is a one-time test requirement.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

The control device operating parameters to be monitored are pressure drop across the three baghouses (even though the downstream RCO will also serve as additional PM control), total power in the WESP (even though the downstream RTO will also serve as additional PM control), and RTO/RCO temperature.

The daily visibility check has a 20% opacity action level, which is lower than the 30% proposed because EPD has determined that any opacity from these sources over 20% would likely indicate a mechanical problem and the applicant has not provided any data demonstrating that opacity above 20% is normal “compliant” operation.

To ensure proper operation of the RCO, the permit will require a maintenance plan, as well as annual catalyst bed core samples to ensure activity.

C. Compliance Assurance Monitoring (CAM)

CAM conditions address the selected operating parameters accordingly. VOC and PM from both RTO and RCO are subject to CAM because pre-control emissions exceed 100 tpy and controls are used to comply. PM is subject to the emission standard of Georgia Rule (e). It is not clear in Part 64 if annualized PSD avoidance limits are considered “emissions standards” for the purposes of CAM, but in an abundance of caution, EPD has included this for VOC.

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

B. Specific Record Keeping and Reporting Requirements

Condition 6.1.7.c. requires reporting of excursion of wood-fired furnace exhaust visible emissions, visible emission exceeding the 20% opacity action level from dry hammermills, pellet presses and pellet coolers for two or more consecutive days. RTO and RCO combustion temperature excursions also need to be reported. Fugitive dust emission episodes need to be reported as excursions. Any failure to perform the daily fugitive dust source inspection need to be reported as well. Any baghouse pressure drops outside the normal range also needs reporting.

Conditions 6.2.1-6.2.6 require tracking of production and calculation of emissions using the factors cited in previous sections of this permit. For the Dryer/RTO, Dry Hammermill, Pellet press, Pellet Coolers and the storage silo the latest source tested emission factors are used.

VII. Specific Requirements

A. Operational Flexibility

None requested in this permit application.

B. Alternative Requirements

None

C. Insignificant Activities

See Permit Application on GEOS website.
See Attachment B of the permit

D. Temporary Sources

Not applicable.

E. Short-Term Activities

Not applicable.

F. Compliance Schedule/Progress Reports

Not applicable.

G. Emissions Trading

Not applicable.

H. Acid Rain Requirements

Not applicable.

I. Stratospheric Ozone Protection Requirements

Not applicable.

J. Pollution Prevention

None

K. Specific Conditions

None

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//